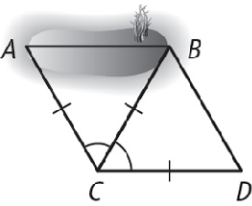


Question	Answer
7.	420 ft
8.	<ol style="list-style-type: none"> <li>1. <math>M</math> is the mdpt. of <math>\overline{PQ}</math> and <math>\overline{RS}</math>. (Given)</li> <li>2. <math>\overline{PM} \cong \overline{QM}</math>, <math>\overline{RM} \cong \overline{SM}</math> (Def. of mdpt.)</li> <li>3. <math>\angle PMS \cong \angle QMR</math> (Vert. <math>\angle</math> Thm.)</li> <li>4. <math>\triangle PMS \cong \triangle QMR</math> (SAS, Steps 2, 3)</li> <li>5. <math>\overline{QR} \cong \overline{PS}</math> (CPCTC)</li> </ol>
9.	<ol style="list-style-type: none"> <li>1. <math>\overline{WX} \cong \overline{XY} \cong \overline{YZ} \cong \overline{ZW}</math> (Given)</li> <li>2. <math>\overline{ZX} \cong \overline{ZX}</math> (Reflex. Prop. of <math>\cong</math>)</li> <li>3. <math>\triangle WXZ \cong \triangle YZX</math> (SSS)</li> <li>4. <math>\angle W \cong \angle Y</math> (CPCTC)</li> </ol>
10.	<ol style="list-style-type: none"> <li>1. <math>G</math> is the mdpt. of <math>\overline{FH}</math>. (Given)</li> <li>2. <math>FG = HG</math> (Def. of mdpt.)</li> <li>3. <math>\overline{FG} \cong \overline{HG}</math> (Def. of <math>\cong</math>)</li> <li>4. Draw <math>\overline{EG}</math>. (Through any 2 pts. there is exactly 1 line.)</li> <li>5. <math>\overline{EG} \cong \overline{EG}</math> (Reflex. Prop. of <math>\cong</math>)</li> <li>6. <math>\overline{EF} \cong \overline{EH}</math> (Given)</li> <li>7. <math>\triangle EGF \cong \triangle EGH</math> (SSS Steps 3, 5, 6)</li> <li>8. <math>\angle EFG \cong \angle EHG</math> (CPCTC)</li> <li>9. <math>\angle 1 \cong \angle 2</math> (<math>\cong</math> Supp. Thm.)</li> </ol>
11.	<ol style="list-style-type: none"> <li>1. <math>\overline{LM}</math> bisects <math>\angle JLK</math>. (Given)</li> <li>2. <math>\angle JLM \cong \angle KLM</math> (Def. of <math>\angle</math> bisect)</li> <li>3. <math>\overline{JL} \cong \overline{KL}</math> (Given)</li> <li>4. <math>\overline{LM} \cong \overline{LM}</math> (Reflex. Prop. of <math>\cong</math>)</li> <li>5. <math>\triangle JLM \cong \triangle KLM</math> (SAS Steps 3, 2, 4)</li> <li>6. <math>\overline{JM} \cong \overline{KM}</math> (CPCTC)</li> <li>7. <math>M</math> is the mdpt. of <math>\overline{JK}</math>. (Def. of mdpt.)</li> </ol>
12.	$ST = VW = RT$ $= UW = \sqrt{10}$ . $RS = UV = 2\sqrt{5}$ . So $\triangle RST \cong \triangle UVW$ by SSS. $\angle RST \cong$ $\angle UVW$ by CPCTC.

Question	Answer
13.	$AB = DE = \sqrt{13}$ , $BC = EF = 5$ , and $AC = DF = \sqrt{18} = 3\sqrt{2}$ . So $\triangle ABC \cong \triangle DEF$ by SSS. $\angle BAC \cong \angle EDF$ by CPCTC.
14.	<ol style="list-style-type: none"> <li><math>\triangle QRS</math> is adj. to <math>\triangle QTS</math>. <math>\overline{QS}</math> bisects <math>\angle RQT</math>. <math>\angle R \cong \angle T</math> (Given)</li> <li><math>\angle RQS \cong \angle TQS</math> (Def. of <math>\angle</math> bisect)</li> <li><math>\overline{QS} \cong \overline{QS}</math> (Reflex. Prop. of <math>\cong</math>)</li> <li><math>\triangle RSQ \cong \triangle TSQ</math> (AAS Steps 1, 2, 3)</li> <li><math>\overline{RS} \cong \overline{TS}</math> (CPCTC)</li> <li><math>\overline{QS}</math> bisects <math>\overline{RT}</math>. (Def. of bisect)</li> </ol>
16a.	HL
16b.	<ol style="list-style-type: none"> <li><math>\overline{AD} \perp \overline{BC}</math> (Given)</li> <li><math>\angle ADB</math> and <math>\angle ADC</math> are rt. <math>\angle</math>s. (Def. of <math>\perp</math>)</li> <li><math>\triangle ADB</math> and <math>\triangle ADC</math> are rt. <math>\triangle</math>s. (Def. of rt. <math>\triangle</math>)</li> <li><math>AB = AC = 20</math> in. (Given)</li> <li><math>\overline{AB} \cong \overline{AC}</math> (Def. of <math>\cong</math>)</li> <li><math>\overline{AD} \cong \overline{AD}</math> (Reflex. Prop. of <math>\cong</math>)</li> <li><math>\triangle ADB \cong \triangle ADC</math> (HL Steps 5, 6)</li> <li><math>\overline{BD} \cong \overline{CD}</math> (CPCTC)</li> </ol>
16c.	17.3 in.; 34.6 in.
18.	21
22.	Yes; $\triangle JKM \cong \triangle LMK$ by SSS, so $\angle JKM \cong \angle LMK$ by CPCTC. Therefore, $\overline{JK} \parallel \overline{ML}$ by Conv. of Alt. Int. $\angle$ s Thm.

Question	Answer
23.	 <p>The distance from <math>C</math> to <math>A</math>, from <math>C</math> to <math>B</math>, and from <math>C</math> to <math>D</math> must be <math>\cong</math>. <math>\angle ACB \cong \angle DCB</math>. If <math>\triangle ACB \cong \triangle DCB</math> by SAS, then <math>AB = DB</math>.</p>
24.	C